

# Sergey Uvarov

## List of Publications by Year in descending order

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Version: 2024-02-01

60  
papers

342  
citations

933447

10  
h-index

888059

17  
g-index

60  
all docs

60  
docs citations

60  
times ranked

182  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fatigue crack initiation and growth in a 35CrMo4 steel investigated by infrared thermography. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2005, 28, 169-178.	3.4	59
2	Theoretical analysis, infrared and structural investigations of energy dissipation in metals under cyclic loading. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 462, 367-369.	5.6	42
3	Nonlinear crack dynamics and scaling aspects of fracture (experimental and theoretical study). <i>International Journal of Fracture</i> , 2004, 128, 285-292.	2.2	27
4	Nonlinear and structural aspects of transitions from damage to fracture in composites and structures. <i>Computers and Structures</i> , 2000, 76, 67-75.	4.4	18
5	Nonequilibrium transitions in ensembles of defects attributed to dynamic localization of plastic deformation. <i>Technical Physics Letters</i> , 2014, 40, 1075-1077.	0.7	18
6	An experimental study of non-Newtonian properties of water under electroexplosive loading. <i>Technical Physics Letters</i> , 2014, 40, 766-768.	0.7	15
7	Scale invariance in dynamic fragmentation of quartz. <i>Physical Mesomechanics</i> , 2014, 17, 81-88.	1.9	15
8	Crack propagation: Dynamic stochasticity and scaling. <i>Technical Physics Letters</i> , 2000, 26, 254-258.	0.7	13
9	Morphology of multiscale defect structures and plastic strain localization during impact perforation of A6061 alloy targets. <i>Technical Physics Letters</i> , 2012, 38, 6-8.	0.7	12
10	Space-time scale invariance in dynamically fragmented quasi-brittle materials. <i>Physical Mesomechanics</i> , 2016, 19, 86-92.	1.9	12
11	Critical dynamics of damage-failure transition in wide range of load intensity. <i>Acta Mechanica</i> , 2021, 232, 1943-1959.	2.1	11
12	Multiscale statistical laws of dynamic fragmentation. <i>Physical Mesomechanics</i> , 2017, 20, 90-101.	1.9	10
13	Transition from multi-center fracture to fragmentation statistics under intensive loading. <i>Procedia Structural Integrity</i> , 2016, 2, 1944-1950.	0.8	8
14	Fractal statistics of brittle fragmentation. <i>Frattura Ed Integrita Strutturale</i> , 2013, 7, 60-68.	0.9	7
15	Structural mechanisms of formation of adiabatic shear bands. <i>Frattura Ed Integrita Strutturale</i> , 2016, 10, 296-304.	0.9	7
16	Theoretical and experimental investigation of the dissipated and stored energy ratio in iron under quasi-static and cyclic loading. <i>Strength of Materials</i> , 2008, 40, 90-93.	0.5	6
17	Studying the rate of heat dissipation at the vertex of a fatigue crack. <i>Technical Physics Letters</i> , 2014, 40, 810-812.	0.7	6
18	Analysis of fragmentation statistics of alumina tubular specimens. <i>AIP Conference Proceedings</i> , 2014, , .	0.4	6

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19	Scaling Law of Quasi Brittle Fragmentation. , 2014, 3, 580-585.		6
20	Scaling properties of crack branching and brittle fragmentation. EPJ Web of Conferences, 2010, 10, 00037.	0.3	5
21	Study of Ceramic Tube Fragmentation under Shock Wave Loading. , 2014, 3, 592-597.		5
22	Pulse loading of glycerol by electric explosion of wire. Journal of Physics: Conference Series, 2015, 653, 012034.	0.4	4
23	Metastable states, relaxation mechanisms, and fracture of liquids under severe loading conditions. Physical Mesomechanics, 2017, 20, 399-406.	1.9	4
24	Statistical Laws of Dynamic Fragmentation of ZrO <sub>2</sub> Ceramics. Applied Mechanics and Materials, 0, 784, 468-475.	0.2	3
25	Investigation of mechanical properties of Armco-iron during fatigue test. Mechanics of Advanced Materials and Modern Processes, 2016, 2, .	2.2	3
26	Statistical patterns of deformation localization during plastic flow in the AMg6 alloy. Letters on Materials, 2020, 10, 38-42.	0.7	3
27	Experimental and numerical study of plastic shear instability under high-speed loading conditions. , 2014, , .		2
28	Experimental study of fragmentation of fused quartz cylinders under quasi-static loading with the fractoluminescence recording. Procedia Structural Integrity, 2021, 32, 10-16.	0.8	2
29	Scaling laws in fragmentation dynamics of rock materials. Procedia Structural Integrity, 2021, 33, 357-364.	0.8	2
30	Numerical simulation of spall failure in metals under shock compression. , 2009, , .		1
31	Scaling properties of fracture surfaces of dynamically loaded aluminium alloy specimens. , 2012, , .		1
32	Study of plastic strain localization mechanisms caused by nonequilibrium transitions in mesodefekt ensembles under high-speed loading. AIP Conference Proceedings, 2015, , .	0.4	1
33	The effect of initial porosity of a sample under electric explosion loading. AIP Conference Proceedings, 2016, , .	0.4	1
34	Energy absorption and strength of ceramics with different porosity under dynamic loading. AIP Conference Proceedings, 2016, , .	0.4	1
35	Mechanical and microstructural aspects of material failure due to localized shear under high-rate loading conditions. AIP Conference Proceedings, 2018, , .	0.4	1
36	Investigation of damage accumulation in a prestrained aluminum-magnesium alloy under gigacycle fatigue. AIP Conference Proceedings, 2018, , .	0.4	1

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37	Regularities of fracture pattern formation in alumina ceramics subjected to dynamic indentation. <i>Frattura Ed Integrita Strutturale</i> , 2017, 11, 552-561.	0.9	1
38	Modification of the mechanical properties of zirconium dioxide ceramics by means of multiwalled carbon nanotubes. <i>Nanosystems: Physics, Chemistry, Mathematics</i> , 2016, , 198-203.	0.4	1
39	Dynamic and quasistatic interlaminar shear strength of carbon fiber laminate under bi-axial loading conditions. <i>Procedia Structural Integrity</i> , 2021, 33, 465-468.	0.8	1
40	Acoustic emission phase analysis of damage-failure transition staging in composite materials. <i>Procedia Structural Integrity</i> , 2022, 41, 518-526.	0.8	1
41	Collective modes in the microshear ensemble as a mechanism of the failure wave. <i>Strength of Materials</i> , 2008, 40, 94-97.	0.5	0
42	DAMAGE-FAILURE TRANSITION: DYNAMIC CRACK BRANCHING, FRAGMENTATION, FAILURE WAVE. , 2008, , .		0
43	Fractoluminescence of the Zirconia Ceramics with Different Porosity under Dynamic Loading. , 2014, 3, 574-579.		0
44	Spatio-temporal Localization of Deformation in Rocks under Quasistatic Uniaxial Loading. , 2014, 3, 2195-2200.		0
45	Mechanical and Microstructural Aspects of Localized Plastic Flow. <i>Solid State Phenomena</i> , 0, 243, 113-120.	0.3	0
46	Experimental study of mechanical properties of liquids under shock wave loading. <i>Journal of Physics: Conference Series</i> , 2016, 774, 012051.	0.4	0
47	Scaling laws of structure and fragmentation parameters of ZrO <sub>2</sub> ceramics.. <i>Procedia Structural Integrity</i> , 2016, 2, 1936-1943.	0.8	0
48	Structural and mechanical aspects of the formation of adiabatic shear bands under dynamic loading and during target perforation. <i>AIP Conference Proceedings</i> , 2016, , .	0.4	0
49	Localized instability of plastic deformation at dynamic loading caused by nonequilibrium transitions in defect ensembles. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	0
50	Multiscale plastic shear instability as mechanism of turbulence. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	0
51	Investigation of localized plastic shear mechanisms under dynamic loading. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	0
52	Critical Phenomena in Portevinâ€“Le Chatelier effect during compression of aluminium-magnesium alloy and stored energy evolution. <i>Procedia Structural Integrity</i> , 2019, 18, 309-313.	0.8	0
53	The study of mechanical and microstructural aspects of localized shear fracture in metals under dynamic loading. <i>Procedia Structural Integrity</i> , 2019, 18, 262-267.	0.8	0
54	Investigation of mechanical and microstructural aspects of plastic shear localization at different types of dynamic loading. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	0

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55	Strain localization, cracking and temperature rise in the adhesive layer between tabs and composite material in the fatigue test. AIP Conference Proceedings, 2020, , .	0.4	0
56	Spall Fracture in ARMCO Iron: Structure Evolution and Spall Strength. , 2009, , 219-225.		0
57	The effect of porosity on fragmentation statistics of dynamically loaded ZrO <sub>2</sub> ceramics. Frattura Ed Integrita Strutturale, 2018, 12, 106-112.	0.9	0
58	Self-organization behavior of defective structures as a mechanism of plastic strain localization under dynamic loading. AIP Conference Proceedings, 2020, , .	0.4	0
59	Evaluation of corrosion resistance of aluminum alloy under consecutive dynamic and VHCF regime. AIP Conference Proceedings, 2020, , .	0.4	0
60	Effect of self-organised behaviour of defective material structure on localization of plastic deformation and fracture under static and dynamic loads. AIP Conference Proceedings, 2022, , .	0.4	0